66ETOT* 260Z7h6D

Fig. 1
PRIOR ART

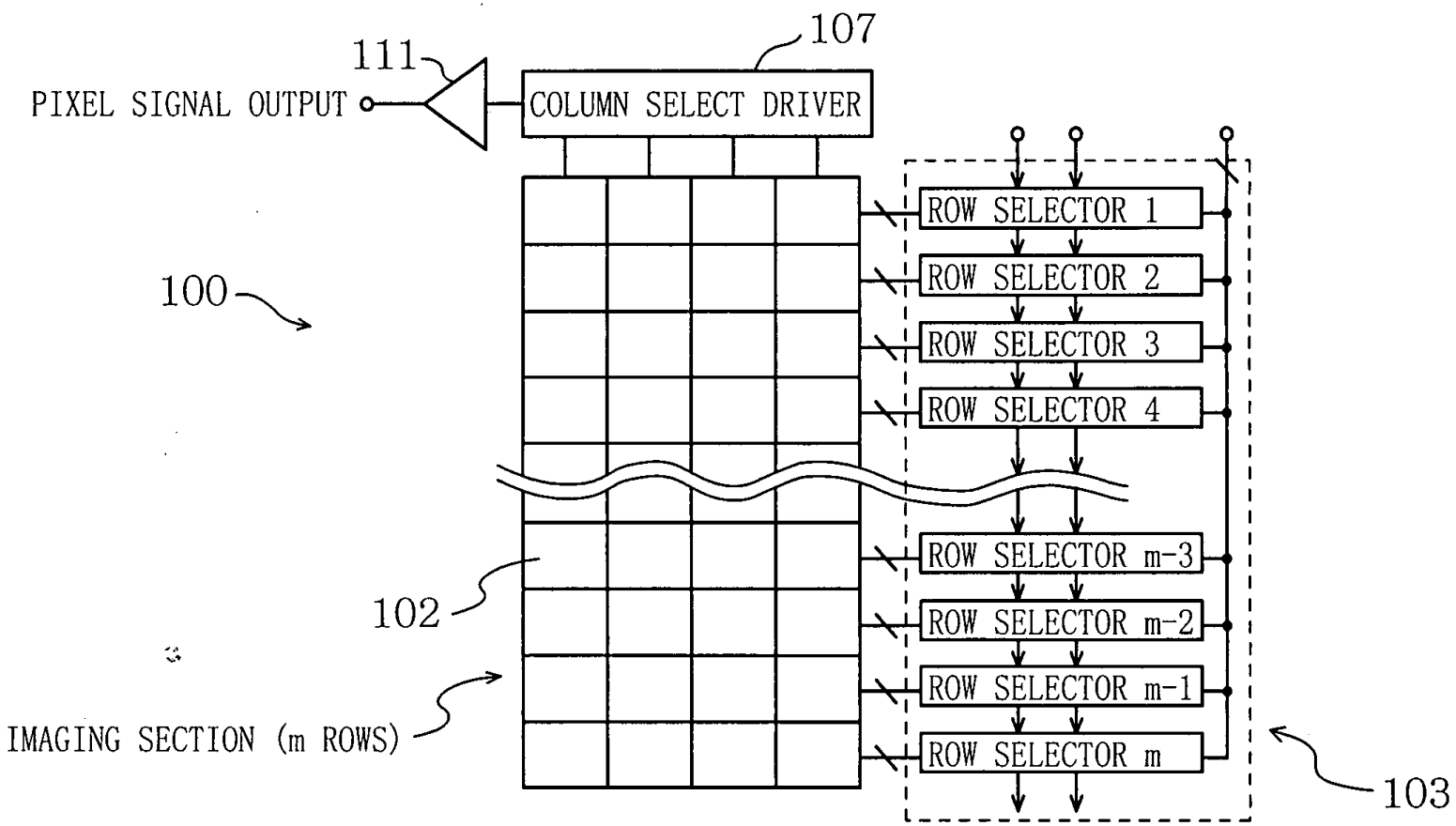


Fig. 2

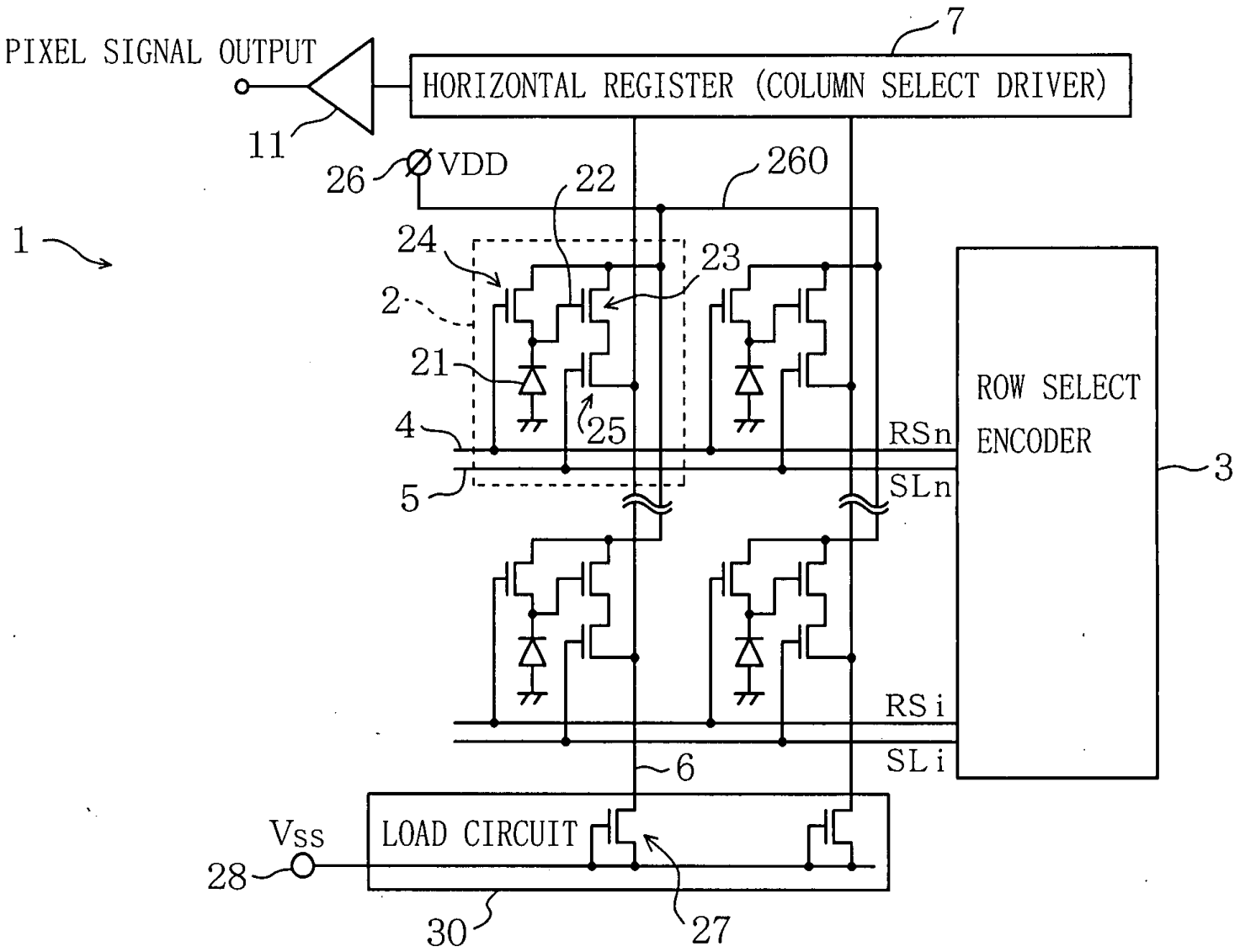

PIXEL SIGNAL OUTPUT
7
HORIZONTAL REGISTER (COLUMN SELECT DRIVER)
11
26
VDD
22
260
1
24
23
2
21
25
4
RSn
ROW SELECT
ENCODER
3
5
SLn
RSi
SLi
6
Vss
LOAD CIRCUIT
28
30
27

Fig. 3

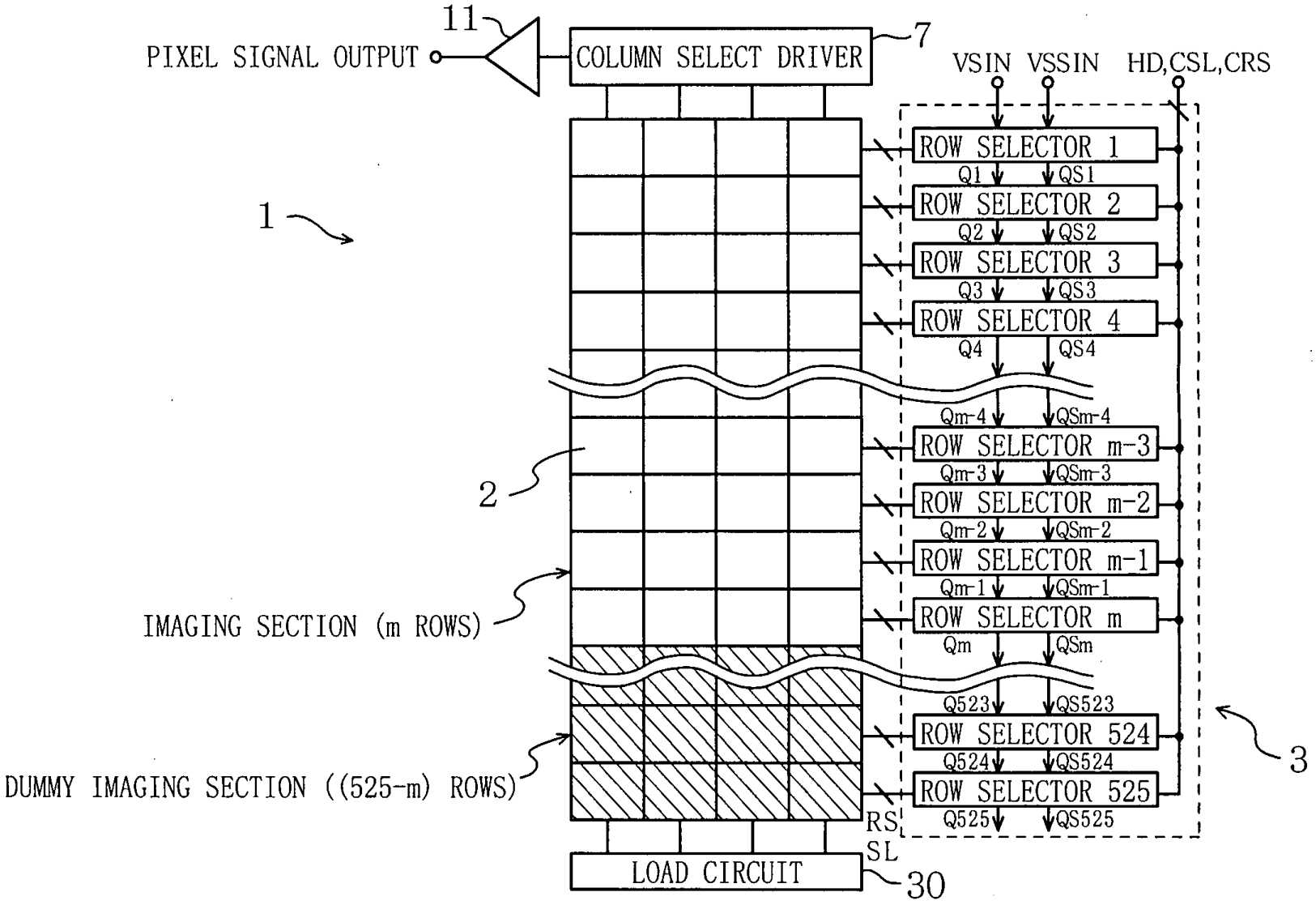
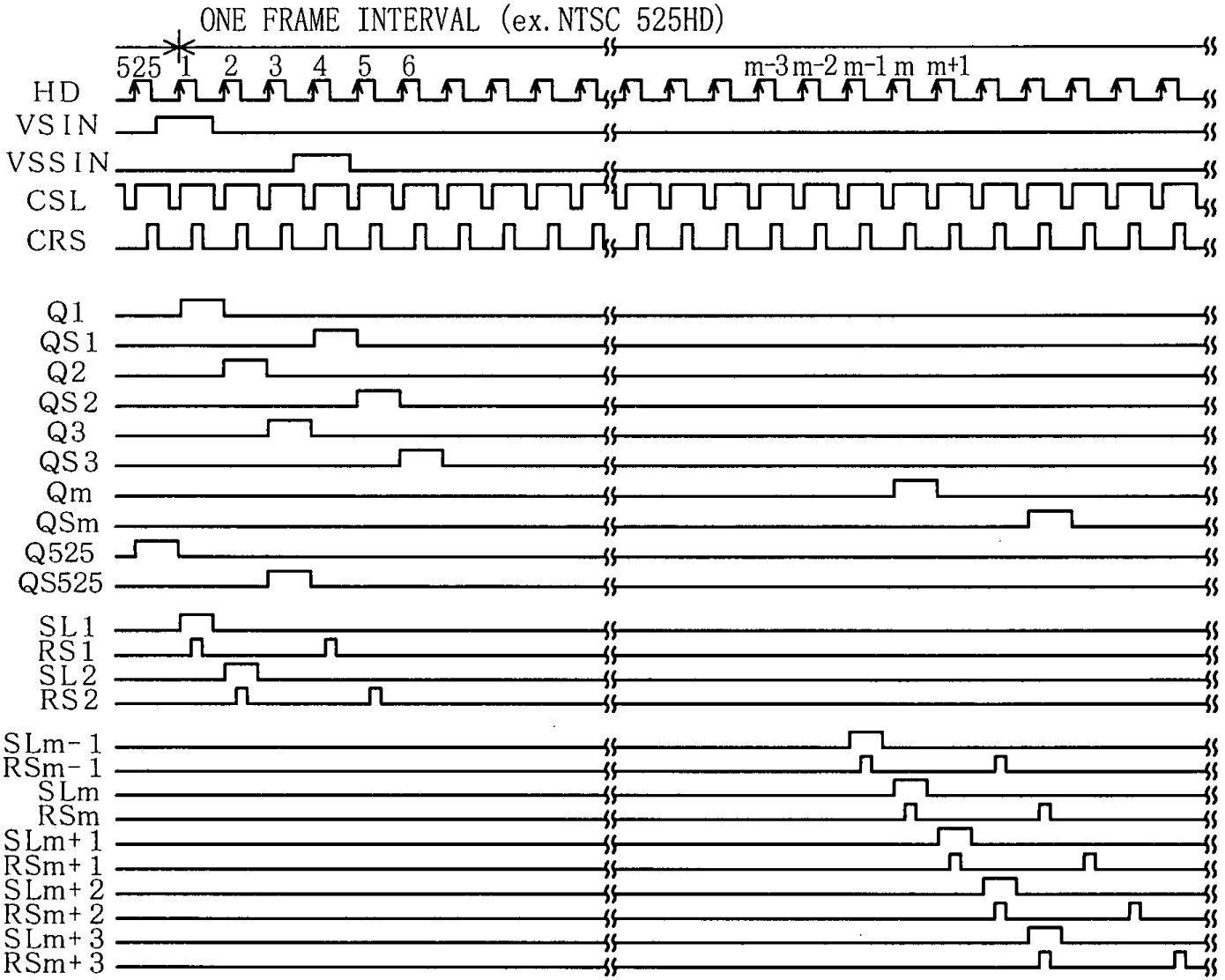
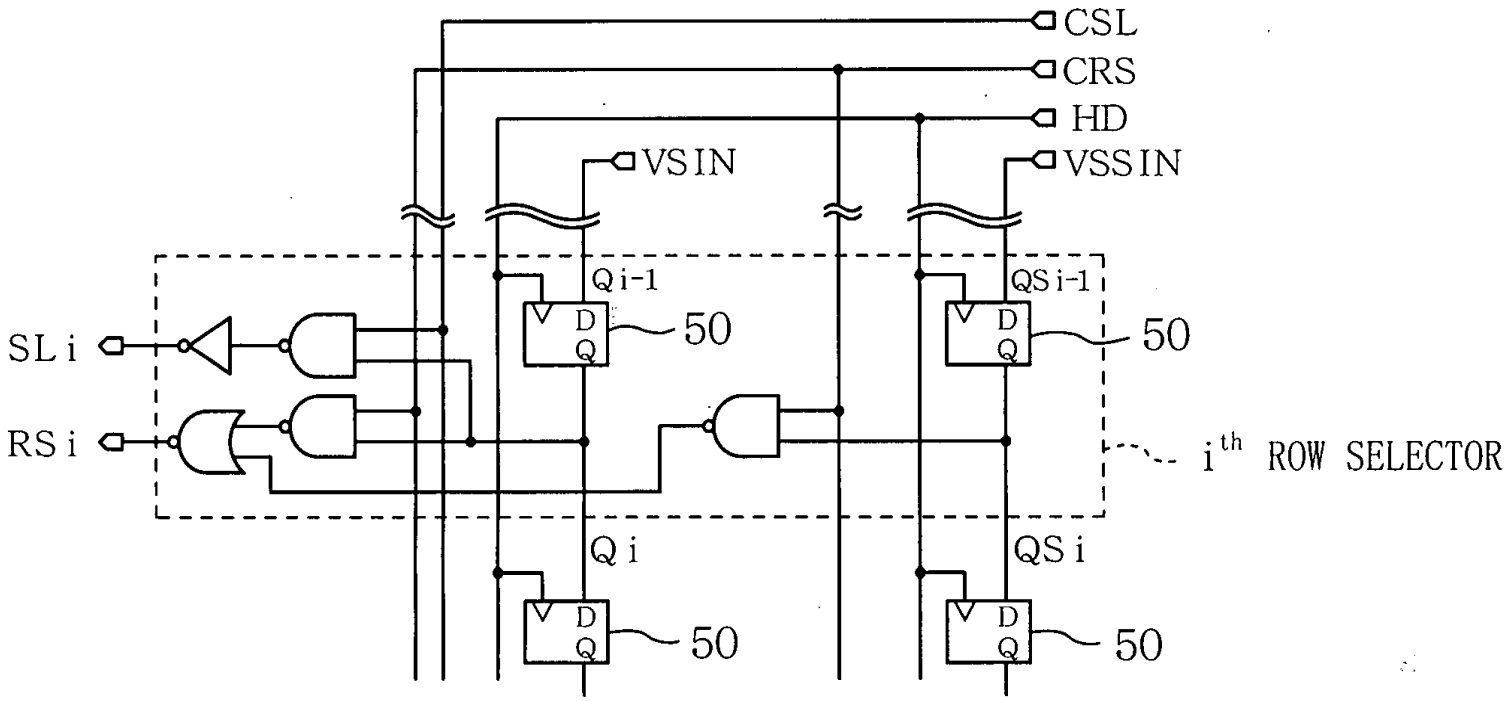

11
PIXEL SIGNAL OUTPUT
COLUMN SELECT DRIVER
7
VSIN VSSIN HD,CSL,CRS
1
ROW SELECTOR 1
Q1 QS1
ROW SELECTOR 2
Q2 QS2
ROW SELECTOR 3
Q3 QS3
ROW SELECTOR 4
Q4 QS4
Qm-4 QSm-4
ROW SELECTOR m-3
Qm-3 QSm-3
ROW SELECTOR m-2
Qm-2 QSm-2
ROW SELECTOR m-1
Qm-1 QSm-1
ROW SELECTOR m
Qm QSm
2
IMAGING SECTION (m ROWS)
Q523 QS523
ROW SELECTOR 524
Q524 QS524
ROW SELECTOR 525
Q525 QS525
3
DUMMY IMAGING SECTION ((525-m) ROWS)
RS
SL
LOAD CIRCUIT
30

Fig. 4


ONE FRAME INTERVAL (ex. NTSC 525HD)
525 1 2 3 4 5 6
m-3 m-2 m-1 m m+1
HD
VSIN
VSSIN
CSL
CRS
Q1
QS1
Q2
QS2
Q3
QS3
Qm
QSm
Q525
QS525
SL1
RS1
SL2
RS2
SLm-1
RSm-1
SLm
RSm
SLm+1
RSm+1
SLm+2
RSm+2
SLm+3
RSm+3

66ETOT"Z607Th60

Fig. 5



66ETOT"Z60ZTh60

Fig. 6

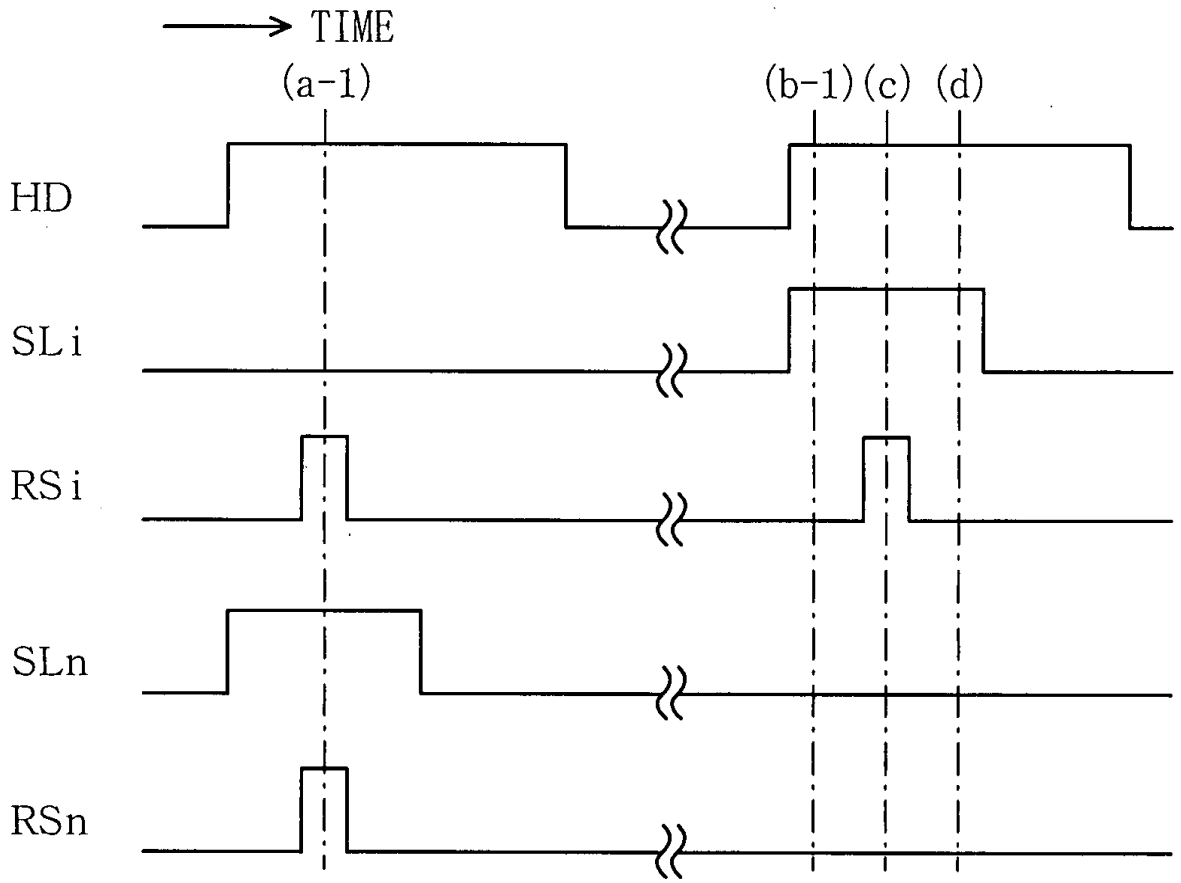


Fig. 7

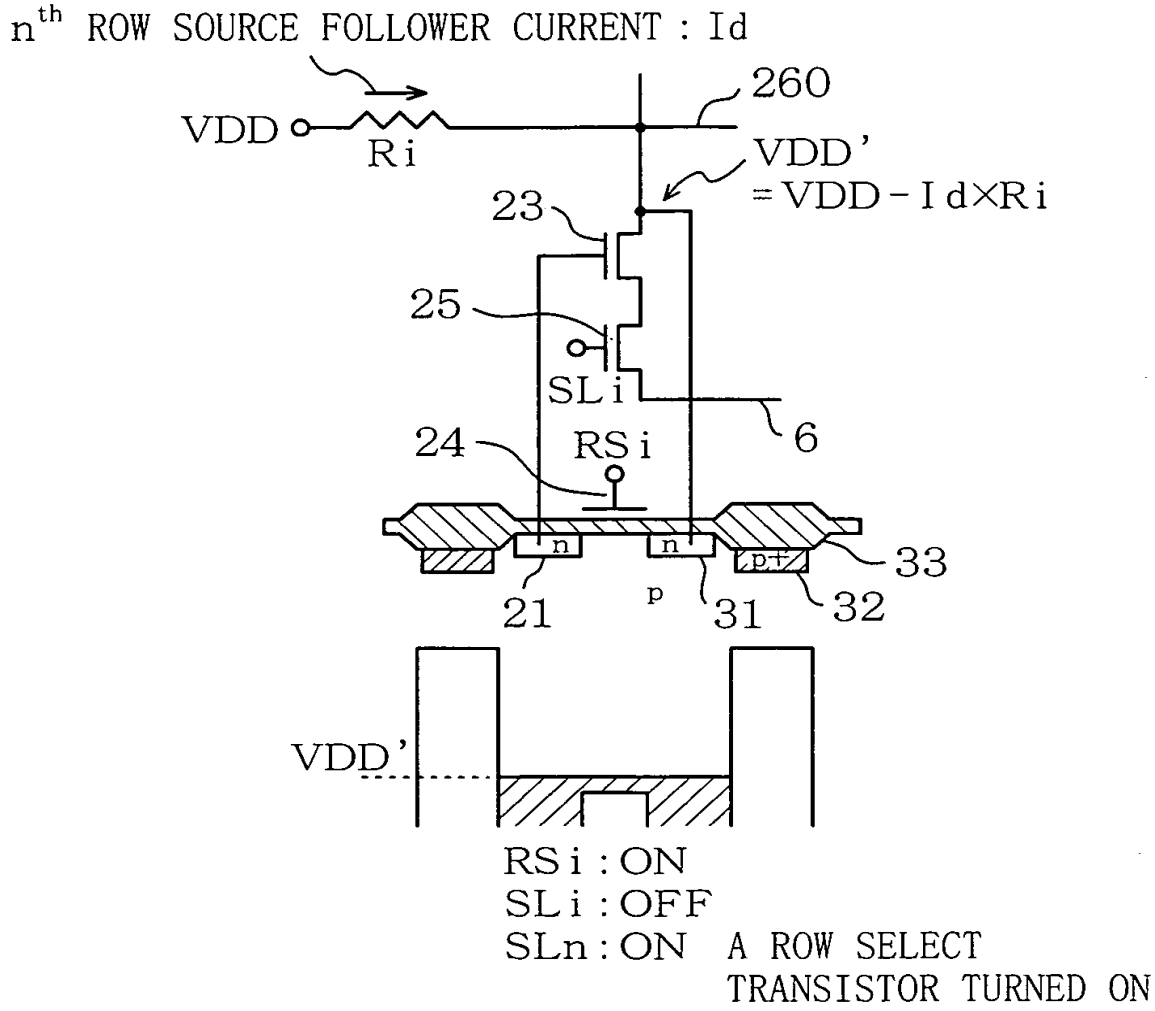

n^th ROW SOURCE FOLLOWER CURRENT : Id
VDD
Ri
260
VDD'
=VDD-Id×Ri
23
25
SLi
6
24
RSi
n
n
p+
33
21
p
31
32
VDD'
RSi:ON
SLi:OFF
SLn:ON A ROW SELECT
TRANSISTOR TURNED ON

Fig. 8

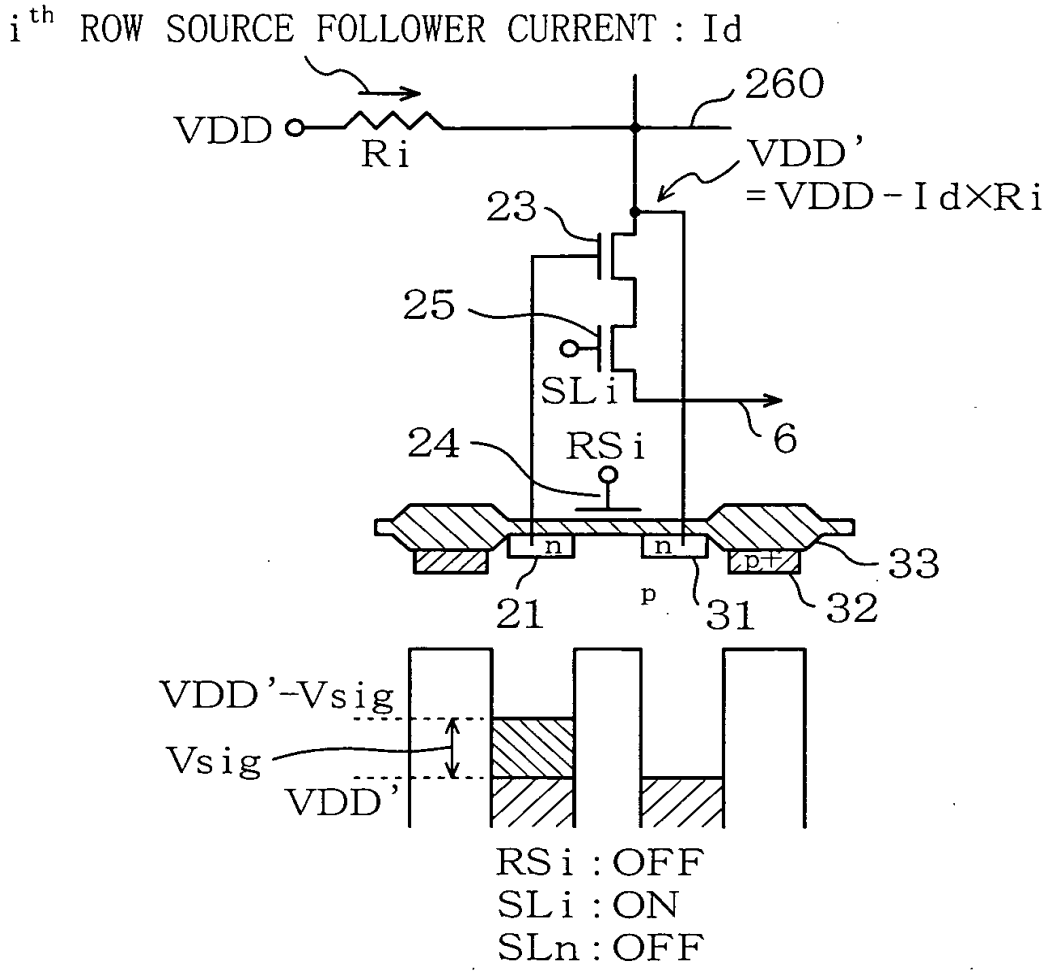

i th ROW SOURCE FOLLOWER CURRENT : Id
VDD
Ri
260
VDD'
=VDD-Id×Ri
23
25
SLi
6
24
RSi
n
n
p+
33
21
p
31
32
VDD'-Vsig
Vsig
VDD'
RSi : OFF
SLi : ON
SLn : OFF

Fig. 9

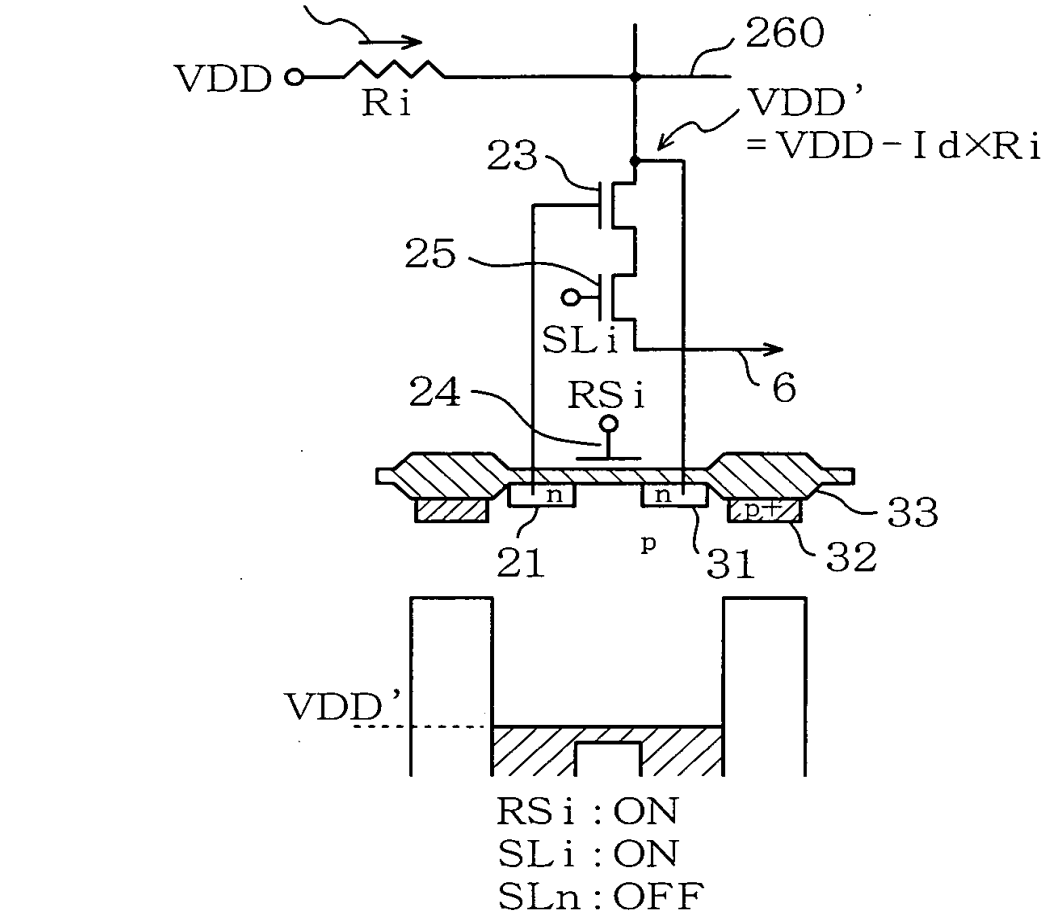

i th ROW SOURCE FOLLOWER CURRENT : Id
VDD
Ri
260
VDD'
=VDD-Id×Ri
23
25
SLi
6
24
RSi
n
n
p+
33
21
p
31
32
VDD'
RSi : ON
SLi : ON
SLn : OFF

Fig. 10

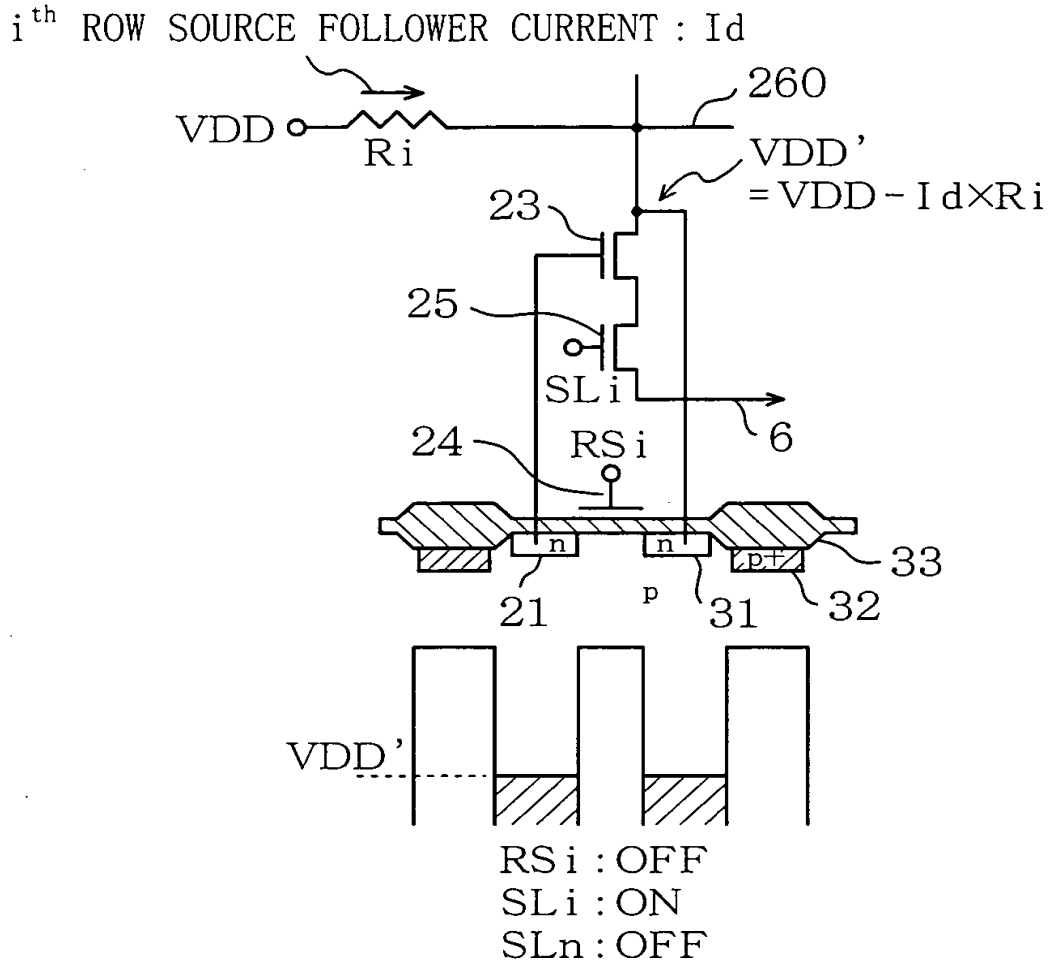

i th ROW SOURCE FOLLOWER CURRENT : Id
VDD
Ri
260
VDD'
=VDD-Id×Ri
23
25
SLi
6
24
RSi
n
n
p+
33
21
p
31
32
VDD'
RSi:OFF
SLi:ON
SLn:OFF

Fig. 11

PRIOR ART

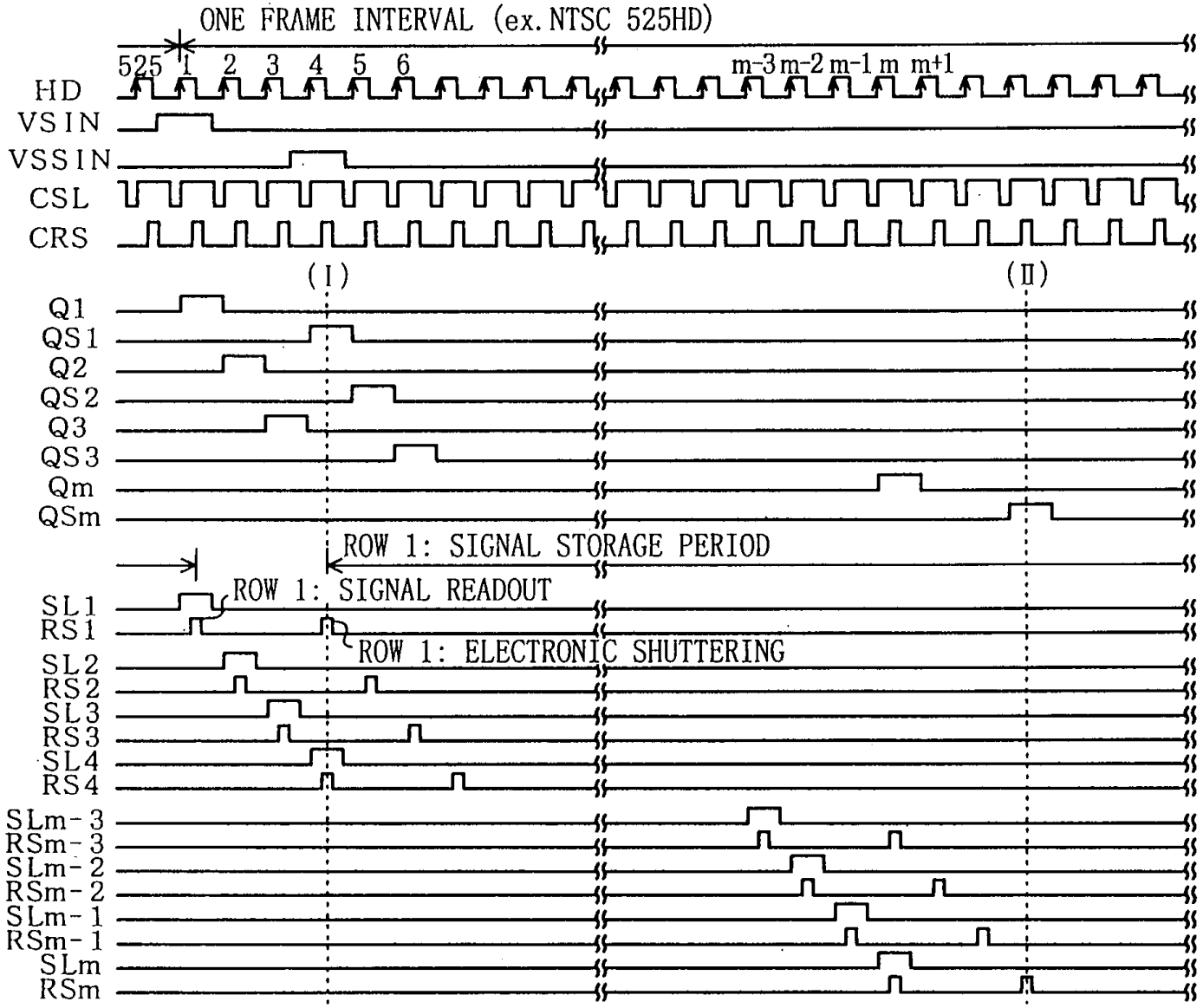


Fig. 12
PRIOR ART

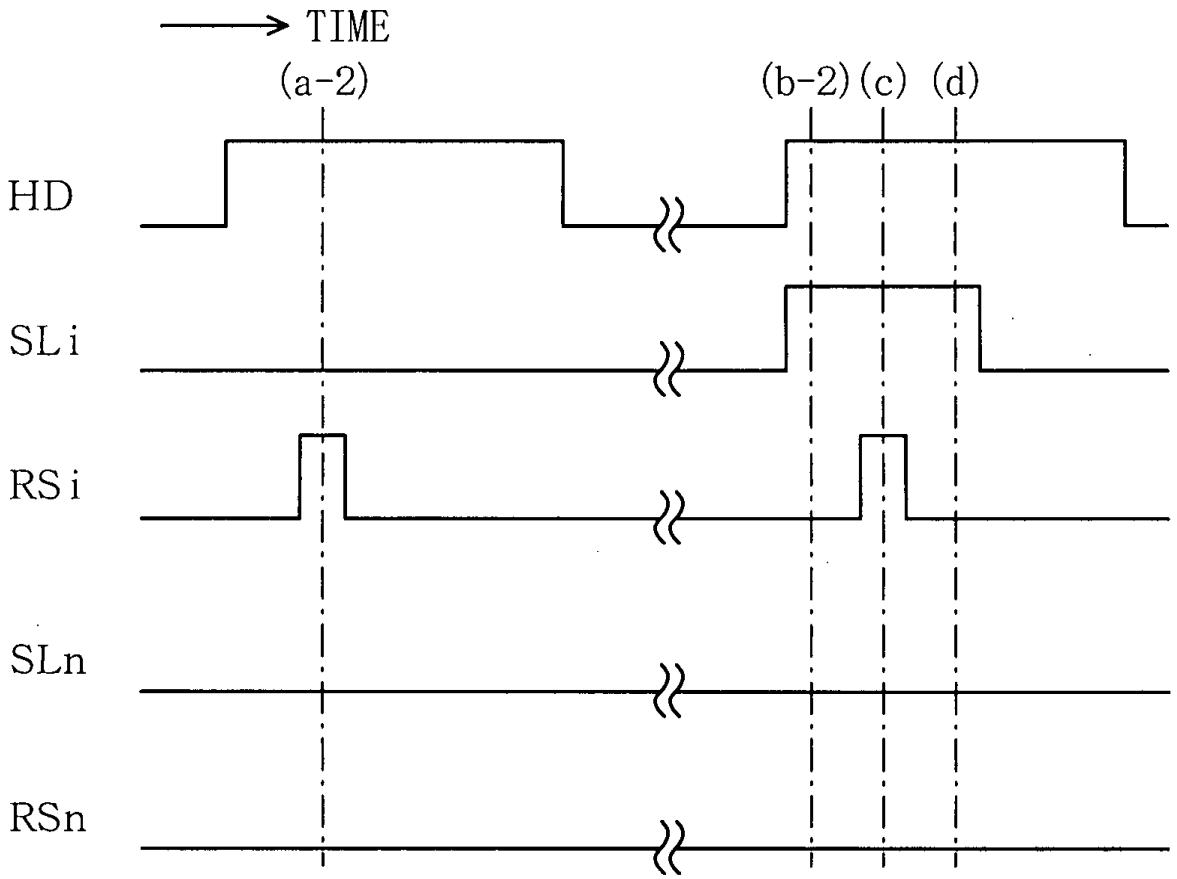


Fig. 13
PRIOR ART

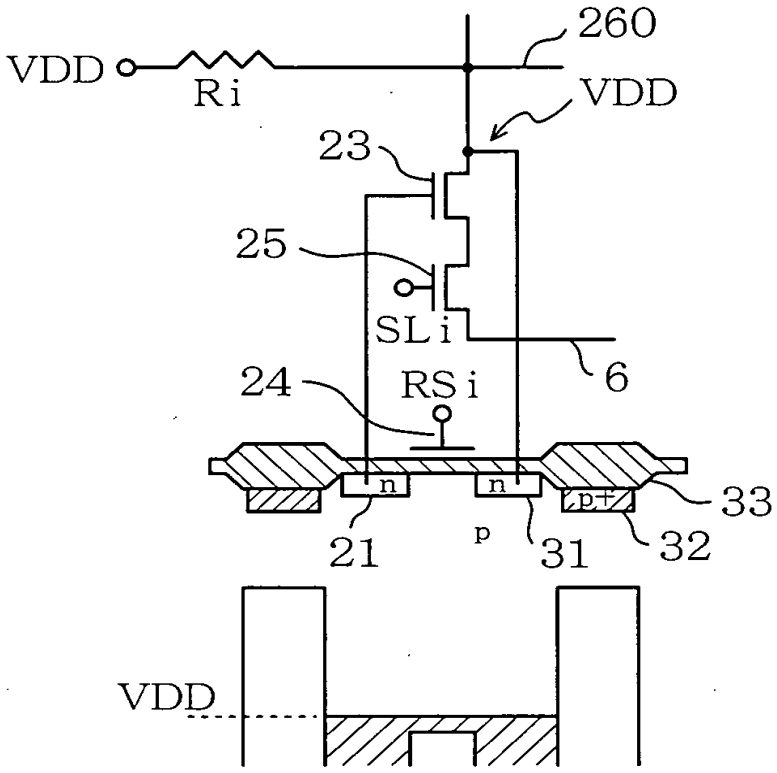
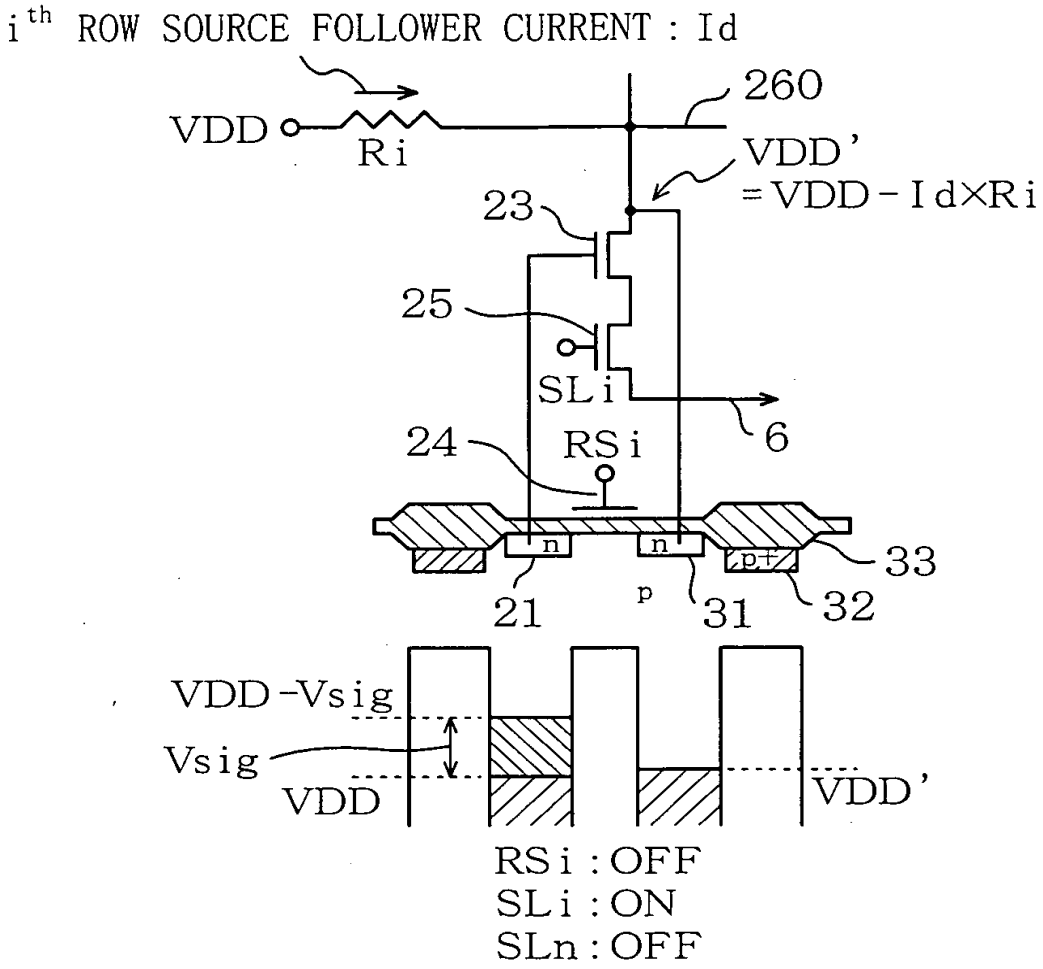


Fig. 14
PRIOR ART



66E10T"Z607h60

Fig. 15

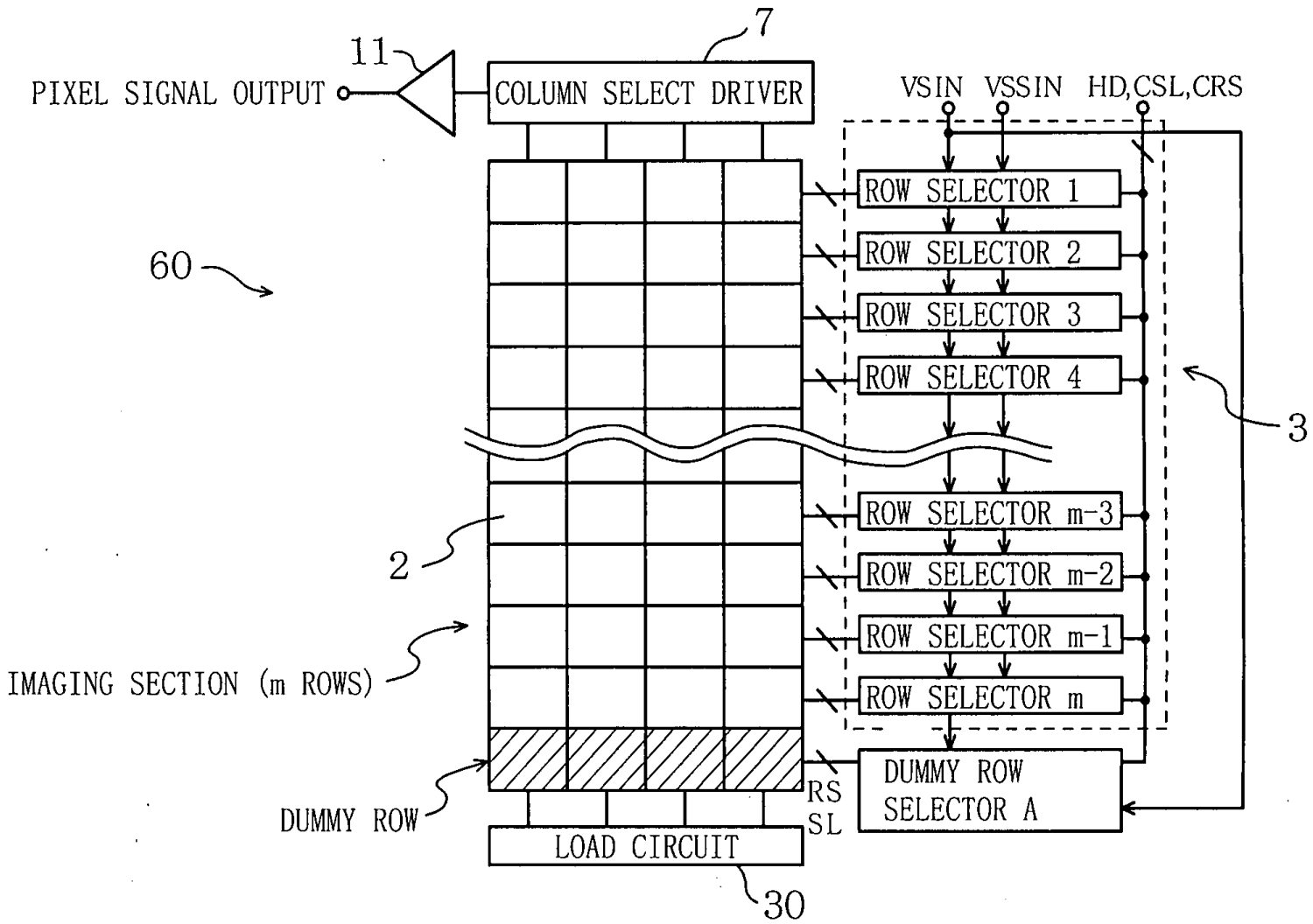


Fig. 16

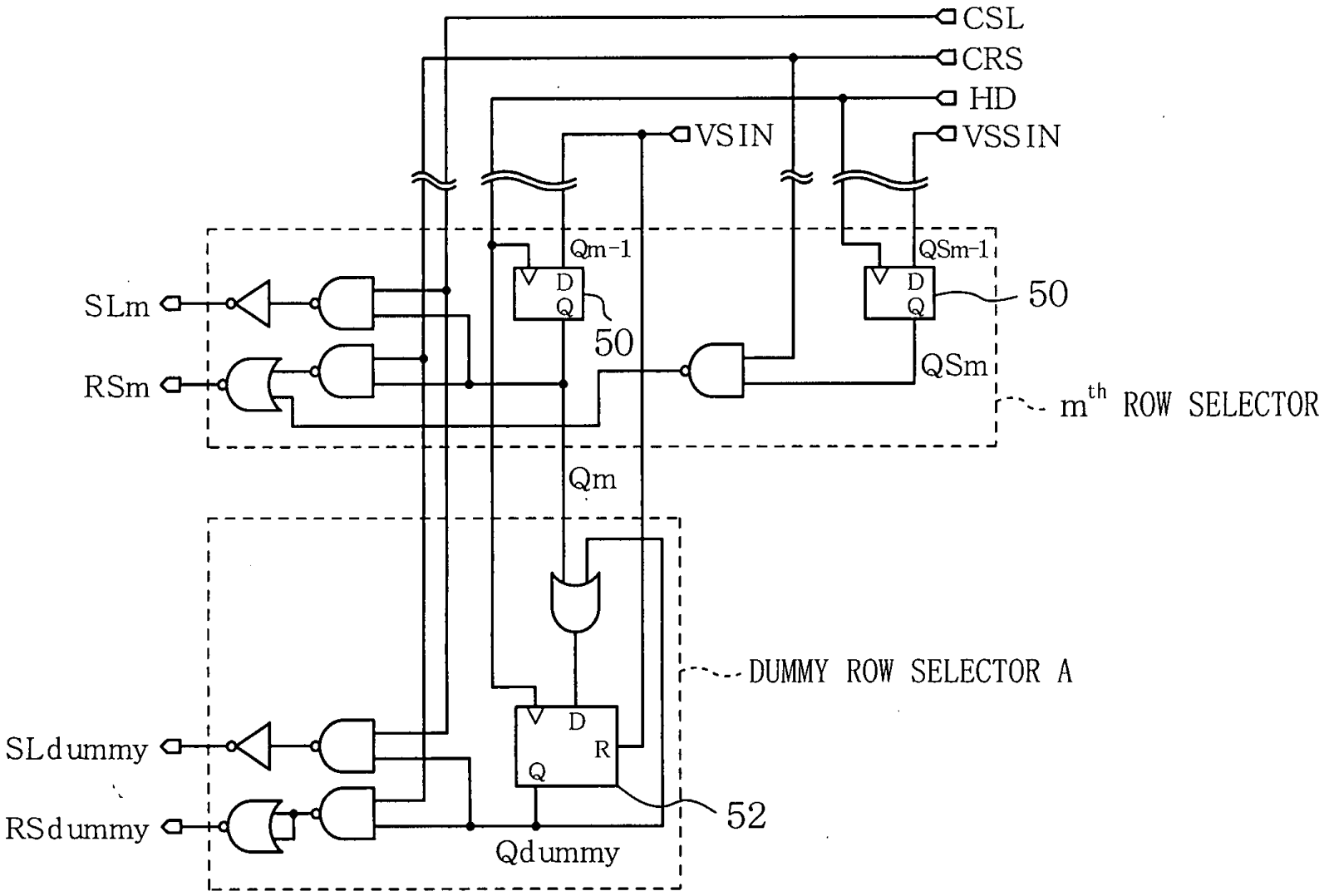
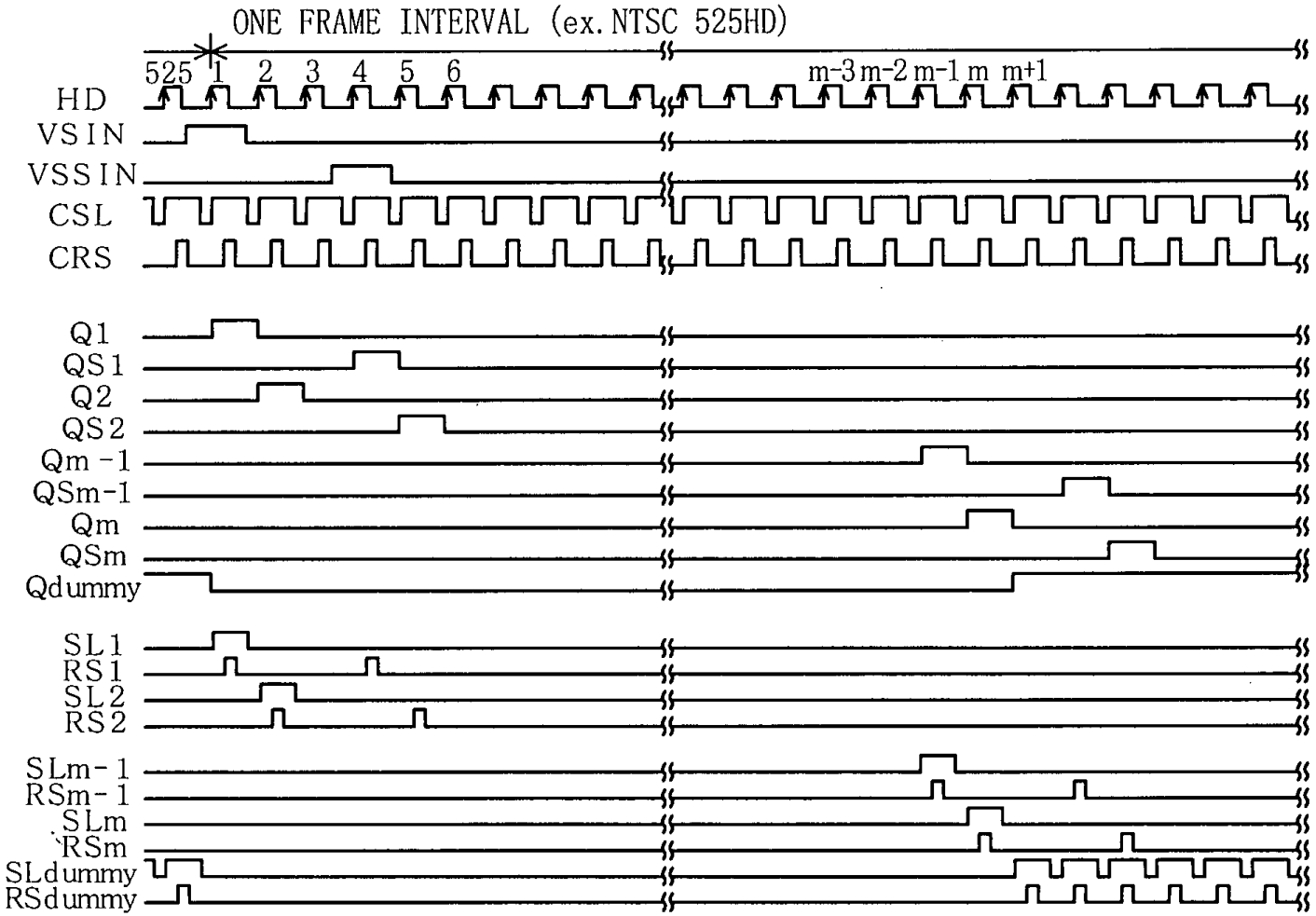

CSL
CRS
HD
VSIN
VSSIN
Qm-1
QSm-1
D
Q
50
SLm
RSm
QSm
m^th ROW SELECTOR
Qm
DUMMY ROW SELECTOR A
D
R
Q
SLdummy
RSdummy
52
Qdummy

Fig. 17


ONE FRAME INTERVAL (ex. NTSC 525HD)
525 1 2 3 4 5 6
m-3 m-2 m-1 m m+1
HD
VSIN
VSSIN
CSL
CRS
Q1
QS1
Q2
QS2
Qm-1
QSm-1
Qm
QSm
Qdummy
SL1
RS1
SL2
RS2
SLm-1
RSm-1
SLm
RSm
SLdummy
RSdummy

66ETOT"Z60ZTh60

Fig. 18

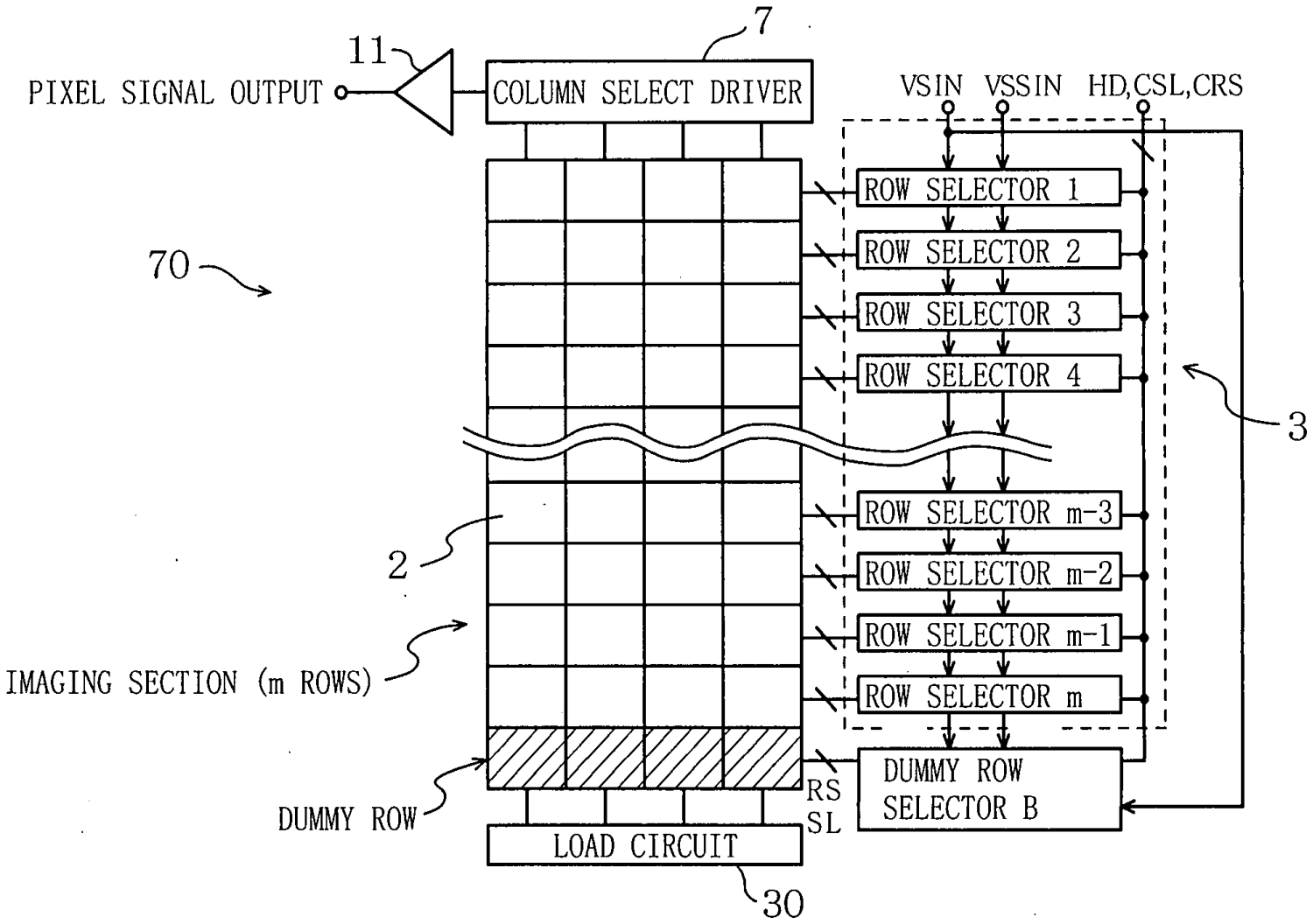


Fig. 19

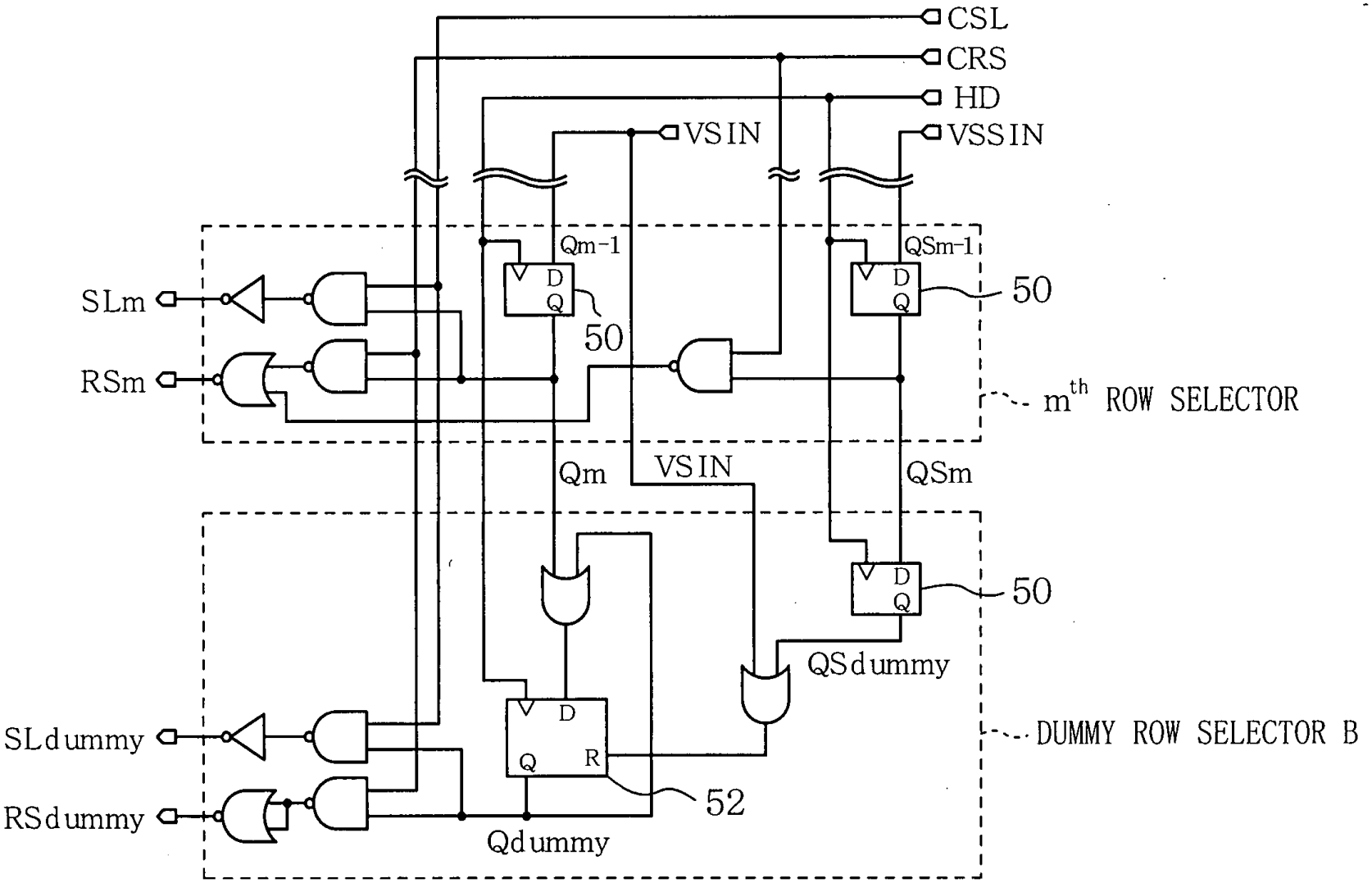
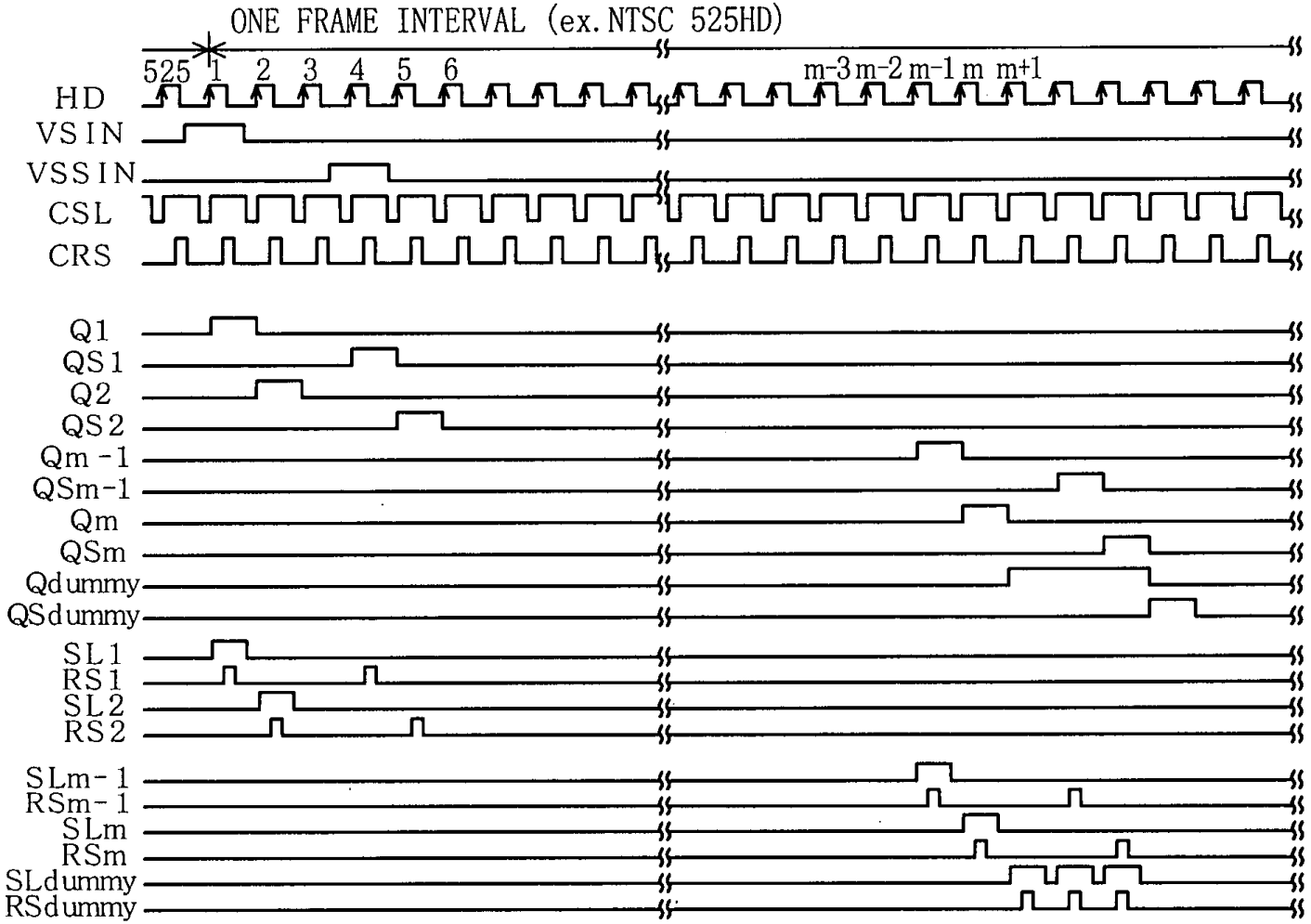

CSL
CRS
HD
VSIN
VSSIN
Qm-1
QSm-1
D
Q
50
SLm
RSm
m^th ROW SELECTOR
Qm
VSIN
QSm
QSdummy
SLdummy
RSdummy
R
52
Qdummy
DUMMY ROW SELECTOR B

Fig. 20


ONE FRAME INTERVAL (ex. NTSC 525HD)
525 1 2 3 4 5 6
m-3 m-2 m-1 m m+1
HD
VSIN
VSSIN
CSL
CRS
Q1
QS1
Q2
QS2
Qm-1
QSm-1
Qm
QSm
Qdummy
QSdummy
SL1
RS1
SL2
RS2
SLm-1
RSm-1
SLm
RSm
SLdummy
RSdummy

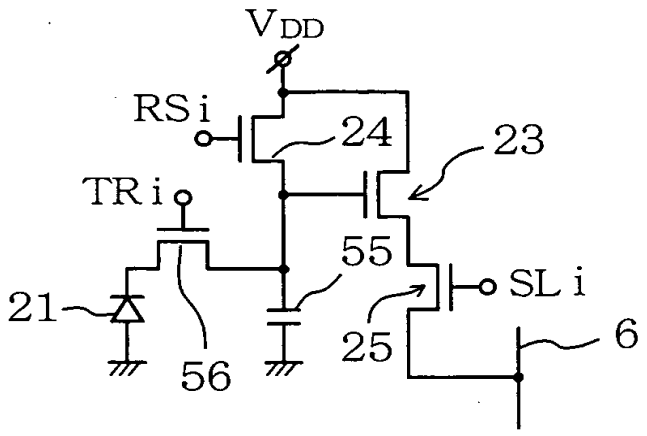



Fig. 21